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40-8380
PDR

ROCKY MOUNTAIN ENERGY

Ref: ESD/TC/82/16

A Subsidiary of Union Pacific Corporation

November 1, 1982

Ms. Kathy Muller Ogle
Land Quality Division
Department of Environmental Quality
401 West 19th Street
Cheyenne, Wyoming 82002

Dear Kathy:

Re: TFN 1 5/186 Nine Mile Lake

Attached are groundwater quality data for Patterns 1, 2, and 3 at Rocky Mountain Energy's (RME) Nine Mile Lake project that you requested. The data includes well sampling results, as determined by our Nine Mile laboratory, for important water quality parameters covering the period February 1982 through September 1982. Portions of this data were previously provided to the DEQ and NRC in the Groundwater Restoration Report submitted in September 1982. The new data is provided to facilitate water quality trend analysis.

As you probably know, groundwater montioring of all perimeter monitor wells and two interior wells (production and injection wells) per pattern is being done on a monthly frequency. This will continue until a final decision on restoration adequacy is obtained. However, we will reiterate our belief that more than an adequate data base to allow a thorough evaluation of post restoration water quality has been provided to the DEQ and NRC. We fully expect that an expedient decision regarding restoration adequacy can be made on the basis of this information. It is doubtful that additional data would further define post restoration water quality. It is certain that requests for more data will prolong the decision making process and delay RME efforts to develop appropriate management plans for decommissioning and reclamation of the project site.

In order to help focus agency review of this data, significant changes in water quality observed since the May 1982 well samplings are noted below.

20848
Info only

Pattern 1

- Monitor well M-9, located between Patterns 1 and 4, indicates a gradual increase in TDS due to elevated Na and SO_4 concentrations. Fe, U_3O_8 and V all appear to be stable.

- TDS levels in the Pattern 1 production well (P-1A) appear to have peaked and are stabilizing. Heavy metal concentrations also appear stable.

Pattern 2

- Groundwater within the pattern interior, as represented by wells P-15 and I-17, seems chemically stable with some improvement visible in P-15.

- All Pattern 2 monitor wells, except M-21, have remained essentially unchanged since February 1982. M-21 appears to have been briefly contacted by a pod of partially unrestored groundwater.

Pattern 3

- Water quality in two of the monitor wells (M-40, M-42) is improving slightly. Monitor wells M-41 and M-43 have remained stable.

- TDS levels in injection well I-46 have decreased from those observed in April and May of 1982. Fe levels are also dropping.

- TDS levels in the production wells (P-50 and P-53) have remained fairly constant over the eight months since restoration was completed. Fe, V, and U levels have also stabilized with some decrease observed in P-50. Ra^{226} concentrations in P-50 are considerably higher than February 1982 levels. This well was completed in the lower ore zone and in contact with the acid lixiviant for a much longer time than well P-53, completed in the upper ore zone.

If you have any questions regarding this or previously supplied data, please contact me at your earliest convenience.

Sincerely,

Michael R. Neumann

Michael R. Neumann
Licensing Specialist

Attachments

cc: R. Lennox (WQD) w/Att.
R. Chancellor (LQD District 4) w/Att.
W. Ackerman wo/Att.
K. Kalman (NRC) w/Att.
J. A. Yellich wo/Att.